

## Section II-iii-N

### Highly Erodible Land

#### General

The basis for identifying highly erodible land is the erodibility index of a soil map unit. The erodibility index of a soil is determined by dividing the potential erodibility for each soil by the soil loss tolerance (T) value established for the soil. The T value represents the maximum annual rate of soil erosion that could take place without causing a decline in long-term productivity. A soil map unit with an erodibility index of 8 or more is a highly erodible soil map unit.

#### Water Erosion

Potential erodibility for sheet and rill erosion is estimated by multiplying the following factors of the Universal Soil Loss Equation (USLE):

1. Rainfall and runoff factor (R)
2. Susceptibility of the soil to water erosion (K)
3. Combined effects of slope length and steepness (LS)

The erodibility index for sheet and rill erosion is represented by the formula  $RKLS/T$ . A soil map unit is highly erodible if the LS factor for the shortest length and minimum percent of slope is used and the  $RKLS/T$  value equals or exceeds 8.

A soil map unit is potentially highly erodible if: (1) the  $RKLS/T$  value using the minimum LS factor is less than 8 and (2) the  $RKLS/T$  value using the maximum LS factor is equal to or greater than 8.

## Highly Erodible Soils

When surface vegetation is removed from large areas of land, soil erosion often results. Sediment, the result of erosion, has a number of adverse effects as a pollutant. In suspension it reduces the amount of sunlight available to aquatic plants, covers fish spawning areas and food supplies and clogs gills of fish. Phosphorus moves into receiving waters attached to soil particles. Excessive quantities can cause algae blooms.

Sediment fills drainage ditches, road ditches and stream channels and shortens the life of reservoirs.

Highly erodible soils are those soils that have a potential to erode at a rate far greater than what is considered tolerable soil loss. The potential erodibility of a soil takes into consideration a) rainfall and runoff, b) the susceptibility of the soil to erosion and c) the combined effects of slope length and steepness. A highly erodible soil has a potential erodibility that would cause a considerable decline in long term productivity of that soil as well as possible negative effects on water quality.

### HIGHLY ERODIBLE SOILS IN FRANKLIN COUNTY AREA AND PARTS OF SOMERSET COUNTY

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. This list of HEL soils is a frozen list as of 1987)

Map Symbol	Soil Name
AdD	Adams loamy sand, 15 to 25 percent slopes
AED	Adams-colton association, steep
BkD	Berkshire fine sandy loam, 15 to 25 percent slopes, very stony
BoC	Boothbay silt loam, 8 to 15 percent slopes
ChD	Chesuncook silt loam, 15 to 25 percent slopes
CkD	Chesuncook silt loam, 15 to 25 percent slopes, very stony
CLD	Chesuncook-telos association, moderately steep, very stony
CsD	Colton gravelly fine sandy loam, 15 to 45 percent slopes
DfD	Dixfield fine sandy loam, 15 to 25 percent slopes
DgD	Dixfield fine sandy loam, 15 to 25 percent slopes, very stony
DUD	Dixfield-colonel association, moderately steep, very stony
EME	Elliottsville-monson complex, steep, very stony
EtC	Elliottsville-thorndike complex, 8 to 15 percent slopes
EtD	Elliottsville-thorndike complex, 15 to 25 percent slopes
HeD	Hermon fine sandy loam, 15 to 25 percent slopes, very stony
HME	Hermon-monadnock association, steep, very stony
LmE	Lyman-rock outcrop-tunbridge complex, 15 to 45 percent slopes, very stony
LNE	Lyman-tunbridge-abram complex, steep, very stony
LyC	Lyman-tunbridge-rock outcrop complex, 3 to 15 percent slopes, very stony
MeD	Marlow fine sandy loam, 15 to 25 percent slopes
MfD	Marlow fine sandy loam, 15 to 25 percent slopes, very stony
MGD	Marlow-dixfield association, moderately steep, very stony
MhD	Masardis fine sandy loam, 15 to 45 percent slopes
MKE	Masardis-adams association, steep
MNE	Monadnock-berkshire complex, steep, very stony
NvC	Nicholville silt loam, 8 to 15 percent slopes
RRE	Ricker-rock outcrop complex, very steep
RSE	Ricker-saddleback association, very steep
RYE	Rock outcrop-abram-lyman complex, very steep, very stony
SAE	Saddleback-mahoosuc-sisk association, very steep, very stony
SKD	Sisk-surplus association, moderately steep, very stony
TeC	Telos silt loam, 8 to 15 percent slopes
ToC	Thorndike-elliottsville complex, rolling, very stony
TOE	Thorndike-elliottsville complex, steep, very stony
TuC	Tunbridge-lyman complex, 8 to 15 percent slopes